

CSCAPE 2005: NOAA Ship McArthur II Weekly Science Report – Leg 1a

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SCIENCE SUMMARY: 09 June - 13 June 2005

Last week we ended within striking distance of completing the Olympic Coast National Marine Sanctuary transect grid, and we did indeed finish on Thursday, three days ahead of schedule! With three full working days left at sea, we decided to conduct some additional photo-identification and biopsy efforts, and to start surveying along the large-scale CSCAPE transect grid. We hit a few glitches with the weather, spending one morning in fog and drizzle, and the next day in 20+ knots of wind. But we were still able to complete two segments of the large-scale CSCAPE transect grid. Working from both the small boat and the *McArthur II*, Annie Douglas, Cornelia Oedekoven, Michael Richlen, Jim Cotton, Gary Friedrichsen, and the rest of the team obtained another 24 identifiable humpback whale flukes. Juan Carlos Salinas skillfully obtained biopsy samples from six of these animals.

While humpbacks have seemingly been our bread and butter this week, we continued to be entertained by active schools of Pacific white-sided dolphins and northern right whale dolphins, often accompanied by a curious northern fur seal or two. Our sighting total for the leg is now at 264, in just 9 days of survey effort. A plot of our cetacean, pinniped and leatherback sightings during the systematic transect lines revealed some distinctive distribution patterns. The dolphins were concentrated largely along the shelf edge, harbor porpoise were seen only in shallow waters off Cape Flattery, and Dall's porpoise were found only on the northernmost lines of our study area.

Our unusual sighting for the week was a single sperm whale, encountered over Juan de Fuca Canyon on Saturday. There have been no sightings of sperm whales in the Olympic Coast National Marine Sanctuary since it was designated in 1994, so this was an exciting find. Our only disappointment was that it was a very windy day and we were not able to obtain photographs and a biopsy.

Our cruise ended on June 13 in Port Angeles, and we were met by about 50 OCNMS volunteers who toured the ship, plus some friendly media folks from two local television stations and the Port Angeles newspaper. Thanks to everyone aboard the *McArthur II* and behind the scenes on land who assisted with both of these events! We had a great cruise, and many of us look forward to continuing CSCAPE beginning July 5. For those on our team who were only aboard for this leg, we bid you a fond farewell: Ed Bowlby, Barbara Blackie, Barry Troutman, Scott Mills, Michael Richlen, and Janet Lamont. Thanks for your dedication and hard work at sea! It was a pleasure sailing with you all. I'd also like to take this opportunity to extend my most heartfelt thanks to our survey coordinator, Annette Henry.

Please visit our web site again for the next planned report on July 8, after the start of our next cruise leg, which begins on July 5 in Seattle and will conduct fine-scale surveys of the Monterey Bay, Gulf of the Farallones, and Cordell Bank National Marine Sanctuaries! We'll also post some photos from the first leg of the cruise during the coming weeks.

Sightings and Effort Summary for Marine Mammals

Date	Start/Stop	Position Time	Total Distance	Avg. Beaufort
060905	0558	N48:26.98 W126:18.84	68.5 nmi	1.6
	1813	N48:22.00 W125:07.62		
061005	0625	N48:34.12 W125:55.13	12.9 nmi	4.3
	1631	N48:37.54 W125:26.26		
061105	0603	N48:02.64 W124:46.53	42.3 nmi	5.1
	2100	N48:00.11 W125:24.91		
061205	0620	N48:02.05 W125:24.24	35.5 nmi	3.3
	1713	N48:28.03 W124:54.89		
061305	Arrive in port, Port Angeles – End of leg			

CODE	SPECIES	TOTAL#	CUM. TOTAL#
017	Short-beaked common dolphin	-	1
022	Pacific white-sided dolphin	8	44
027	northern right whale dolphin	3	13
037	killer whale	3	4
040	harbor porpoise	7	24
044	Dall's porpoise	27	43
046	sperm whale	1	1
069	gray whale	-	2
076	humpback whale	49	103
077	unid. dolphin	3	19
079	unid. large whale	9	10
TOTAL		110	277

Note: Pinnipeds not included; mixed groups are counted once for each species.

Biopsies (Juan Carlos Salinas)

Species	Weekly	Cumulative	
Humpback whale	6	12	(all with fluke photographs to match)
Pacific white-sided dolphin	0	8	
Northern right whale dolphin	0	2	
GRAND TOTAL	6	22	

Photo-Project (Annie Douglas)

The final few days in the OCNMS surpassed all our expectations for fun and scientific photo opportunities. Many thanks are due to the officers at the helm of the MACII, and to Hermie who drove the McArthur's launch. Maneuvering a 224-foot research vessel around whales and dolphins in rough weather is extremely challenging, but the officers responded to every call from the flying bridge, blow or breach that they saw near the ship. We end our time at sea with 40 humpback fluke photographs, about 30 killer whales photographed from L pod, and

photos from one additional school of Pacific white-sided dolphins, including some striking variation in the color pattern of a few animals. Among the humpbacks we had some animals that have shown up for the last few years in the Olympic Coast Sanctuary, one animal was first photographed ten years ago! All in all, hundreds of photos were taken of all the above.

Species	Weekly	Cumulative	
Humpback whale			
Catalog-quality flukes	24	40	
Northern right whale dolphins*	-	4	
Pacific white-sided dolphins*	1	6	
Killer whale individuals	~30	~30	(Southern Residents, L-Pod)

*number of groups photographed

Bird News (Barbara Blackie)

The seabird portion of CSCAPE finished out the cruise in good order. We had excellent weather throughout with only a couple of brief interruptions for rain showers (although we did go off effort many times for whale work!). Below is a very preliminary summary of species and numbers of birds observed during the entire cruise. It does not distinguish between birds seen on or off effort, in or outside of the transect area, and by birders or mammal observers on the big eyes (e.g. the Laysan Albatross).

We saw a grand total of 41 South Polar Skuas; again, a high number for our area at this time. Another rare sighting for our area was a lone Horned Puffin. We rarely see these birds, although the COASST beached bird survey has reported having found several beach cast Horned Puffins along the Washington coast this year - very unusual for them as well. We encountered a few Sabine's Gulls at the tail end of their migration north – always nice to see their striking plumage. Our most common species was the Glaucous-winged/Western Gull hybrid (but again, note that this does not take into account ship-followers or other specific behaviors). As always, Sooty Shearwaters, Common Murres and Glaucous-winged/Western hybrids make up the top three most numerous.

We enjoyed getting to go farther offshore more often than we have in the past, although we did not seem to hit any of the significantly large flocks of Sooty Shearwaters or Fork-tailed Storm-Petrels we usually stumble across during a 10 day cruise. In fact, numbers were lower for all species than in the past. At this time, it is impossible to make any meaningful comparisons from this year to previous OCNMS seabird surveys because the timing, the amount of area covered, and exact positions of the track lines were all different. Having said that, the low numbers of Fork-tailed Storm-Petrels seem odd; prior to 2004, all counts were in the thousands, in 2004, we counted 486 and this year only 56 birds. It will be interesting to look at the data as a whole once we have a chance to address the inherent incongruities. With the collaboration with CSCAPE, we will also have richer oceanographic information than we have ever had before, and this is very exciting. We look forward to seeing seabirds as an integral component of this larger ecosystem study.

We had a great crew this year – Cornelia Oedekoven, with her experience with CSCAPE - both the bird and the mammal side, was invaluable. Scott Mills' local expertise and keen identification skills were essential. Thanks to both!

Bird Sighting Summary Table:

<u>Species Name</u>	<u>Preliminary Count</u>	<u>Species Name</u>	<u>Preliminary Count</u>
Black-footed Albatross	172	Ancient Murrelet	8
Laysan Albatross	1	Common Murre	391
Cassin's Auklet	42	Marbled Murrelet	3
Rhinoceros Auklet	178	Brown Pelican	1
Brandt's Cormorant	8	Red-necked Phalarope (Northern Phal.)	2
Pelagic Cormorant	2	Horned Puffin	1
Harlequin Duck	1	Tufted Puffin	82
White-winged Scoter	3	Flesh-footed Shearwater	1
Surf Scoter	2	Manx Shearwater	2
Greater Scaup	2	Buller's Shearwater (New Zealand Sh.)	1
Northern Fulmar - dark phase	8	All shorebirds except Phalaropes	1
Northern Fulmar - intermediate phase	39	Pink-footed Shearwater	86
Northern Fulmar - light phase	2	Sooty Shearwater	733
California Gull	60	Sooty/Short-tailed(Slenderbilled Sh.)	2
Glaucous-winged Gull	38	South Polar Skua	41
Herring Gull	2	Fork-tailed Storm-Petrel	59
Pigeon Guillemot	3	Leach's Storm-Petrel (White-rumped LSP)	6
Sabine's Gull	4	Arctic Tern	1
Thayer's Gull	1	Caspian Tern	7
Glaucous-winged/Western Hybrid	841	Unidentified Tern	1
Parasitic Jaeger	4	Unidentified Alcid	2
Pomarine Jaeger	5	Unidentified Phalarope	1
Pacific Loon	9	All waterfowl, Anseriform sp.	2
Red-throated Loon	1	Unidentified Gull	1

Oceanographic Operations (Mindy Kelley, Liz Zele, and Lacey O'Neal)

<u>Date</u>	<u>CTDs</u>	<u>Bongo tows</u>	<u>XBTs</u>	<u>Comments</u>
06/09	1	1	3	
06/10	1	(1)	3	Bongo net tore off frame at water surface
06/11	1	1	3	
06/12	1	0	3	
06/13	0	0	0	Arrive Port Angeles, WA – End of leg 1a